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W. H. PRINZ.

STRAINER FOR STEEP TANKS.

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Fig. 1.

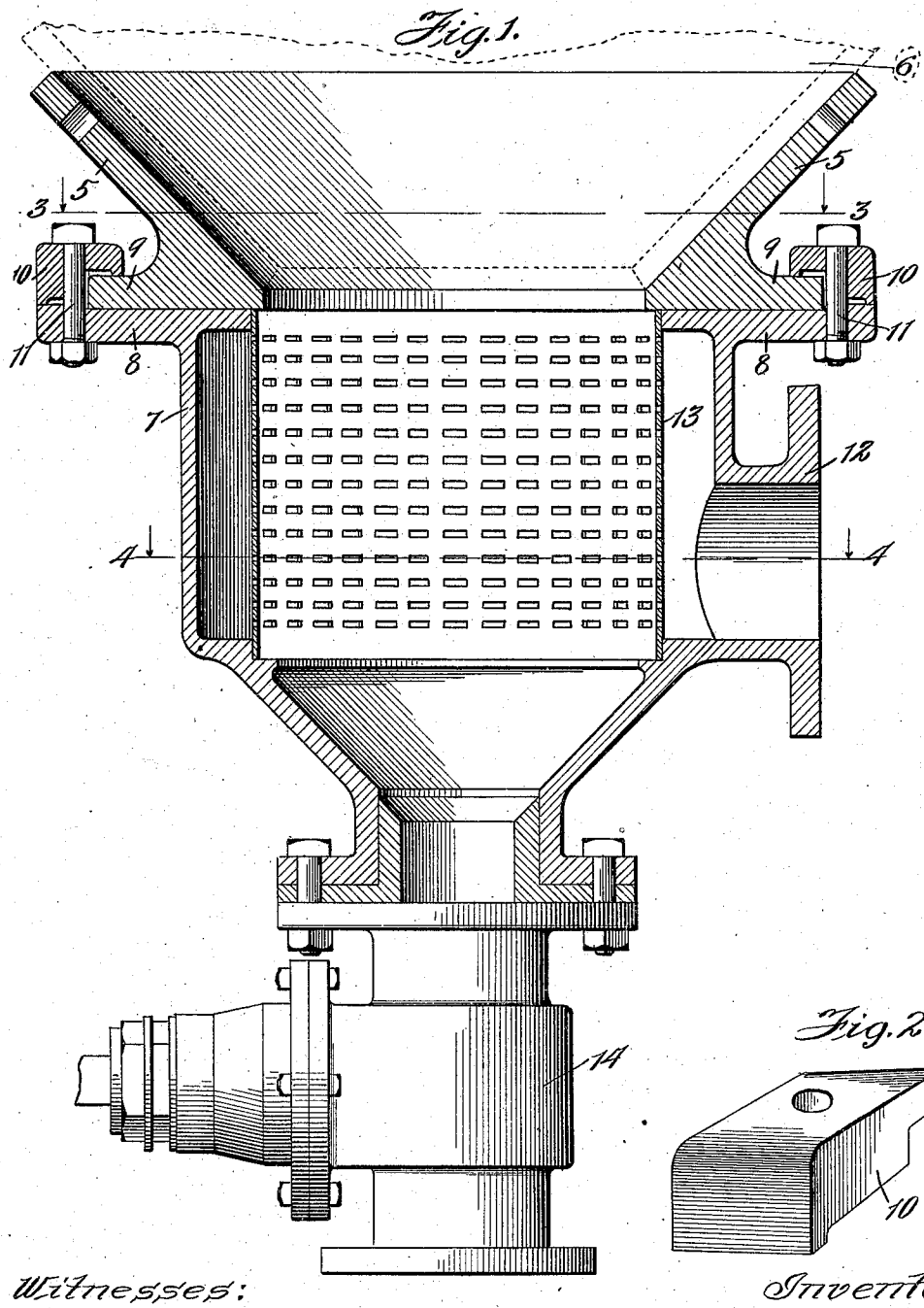

Fig. 2.

Witnesses:

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STRAINER FOR STEEP-TANKS.

No. 885,786. Specification of Letters Patent. Patented April 28, 1908.

Application filed August 14, 1907. Serial No. 388,541.

To all whom it may concern:

Be it known that I WILLIAM H. PRINZ, a citizen of the United States, residing at Oak Park, county of Cook, State of Illinois, have invented certain new and useful Improvements in Strainers for Steep-Tanks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to strainers for steep tanks used in connection with the malting of grain, and has for its object to provide a new and improved construction by which the strainer proper is made readily accessible for purposes of cleansing or renewal.

In steep tanks as heretofore constructed, the lower portion of the steep tank has been provided with a casting riveted thereto and designed to hold a strainer through which the water used in steeping the grain could pass, the grain, however, being retained in the steep tank. A suitable water pipe opened into the casting, usually at one side, but the casting was fixedly or permanently secured to the bottom of the tank, so that the only way access could be had to the strainer was through the tank. By my invention I provide means by which the strainer is held properly in position but may be readily removed, when necessary, since it is held in a separable casting, one of the parts of which may be easily and quickly disconnected fron the other, the latter being fixedly secured to the strainer in the old way. Thus access may be had to the strainer without difficulty, and very much more quickly than has been possible with the former construction.

In the accompanying drawings:—Figure 1 is a vertical section illustrating my improvement, and Fig. 2 is a perspective view of one of the clips by which the lower member of the strainer casting is secured to the upper member thereof.

Referring to the drawings, 5 indicates the upper member of the strainer casting which is of suitable shape for attachment to the steep tank 6 indicated by dotted lines in Fig. 1. The casting is preferably secured to the steep tank by rivets, but may be secured in any other suitable way.

7 indicates the lower member of the strainer casting which is cylindrical in form, having an outwardly projecting marginal flange 8 at its upper end, as shown in Fig. 1, said flange being adapted to fit closely against the corresponding flange 9 at the lower end of the upper member 5 of the strainer casting. It will be noted that the flange 8 is of greater diameter than the flange 9, the object of which arrangement is to provide a support for clips 10, a series of which are placed at intervals around the outer margin of the flange 8 and serve to project over the margin of the flange 9 to bind the two flanges together. Bolts 11 passing through the flange 8 and the clips 10 tightly bind said clips upon the flanges 8 and 9 and securely bind them together so that the parts are held rigidly in contact with each other. This construction not only provides for the ready separation of the two members of the strainer casting, but also provides for adjustment of the parts relatively to each other when necessary, since by loosening the bolts 11, the lower member 7 of the casting may be turned about a vertical axis for purposes of adjustment as will hereinafter appear. This also is an important advantage of a two-part strainer casting.

12 indicates a pipe connection at one side of the lower member 7 of the strainer casting, said connection being used as a means of connecting the casting with a water-pipe through which water may be supplied to or withdrawn from the steep tank. It will be apparent that the adjustability of the lower member of the strainer casting makes it easier to connect the water-pipe thereto, since the lower member 7 of the casting may be swung around as may be necessary to bring it into registration with the pipe to which it is to be connected. This could not be done with the prior construction above referred to.

13 indicates a strainer which is fitted within the casting 7, as shown in Fig. 1.

14 indicates a gate-valve placed below the lower member 7.

As shown in Fig. 1 the strainer 13 is cylindrical in form and is placed vertically in the lower member 7 of the strainer casting so that it does not interfere with the downward passage of the material in the steep tank to the valve 14. The strainer operates however to strain material flowing into or out of the steep tank through the lateral outlet afforded by the pipe connection 12. The diameter of the strainer 13 is less than that

of the lower member 7, so that a channel or passage is provided in said casting around said strainer, as shown in Fig. 1.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A strainer for steep-tanks comprising an upper member secured to the steep-tank and having an outwardly-extending flange at its lower end, a lower member having an outwardly-extending flange at its upper end adapted to fit against the first-mentioned flange, adjustable means connecting said flanges together, and a strainer mounted in said lower member.

2. The combination with a steep-tank of a cylindrical strainer and a plurality of outlets, said strainer being interposed between one of said outlets and the steep-tank, the other outlet communicating directly with said steep-tank, and means detachably connecting said strainer with the steep-tank.

3. A strainer casting for steep tanks comprising an upper member having an outwardly-extending flange at its lower end, a lower member having a corresponding flange at its upper end, one of said flanges being of greater diameter than the other, clips mounted on one of said flanges and engaging the other, and bolts for clamping said clips in position.

4. A strainer casting for steep tanks comprising an upper member having an outwardly-extending flange at its lower end, a lower member having a corresponding flange at its upper end, one of said flanges being of greater diameter than the other, clips mounted on one of said flanges and engaging the other, and bolts extending through the wider flange and through said clips for binding said flanges together.

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Witnesses:
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